

R E M A R K S

Claims 1 and 3-34 are currently pending in the application. Claims 27 and 28 are hereby cancelled. New claims 35-38 are presented for consideration.

Claims 1, 3, 4, 6-15, 17, 21-26 and 29-34 stand rejected under 35 USC §103 as obvious over "Japan '141" in view of U.S. Patent No. 4,503,826, to Kessler et al (Kessler). Claim 5 stands rejected under 35 USC §103 as obvious over Kessler in view of Japan '141 and further in view of U.S. Patent No. 6,722,305 (Mizushima). Claims 16 and 18-20 stand rejected under 35 USC §103 as obvious over Japan '141 in view of Kessler and further in view of U.S. Patent No. 6,009,856, to Smith, III et al (Smith).

Reconsideration of the rejection of claims 1, 3-26, 29-34 and favorable consideration of new claims 35-38 are requested.

Applicant's undersigned attorney wishes to thank Examiner Miller for the courtesies extended him during the telephonic interview on August 2, 2007. During the interview, claim 1 was discussed in detail. It was noted by the undersigned that Japan '141 does not disclose an intermittently operating valve disposed in a corresponding second channel so as to be closed and opened intermittently or periodically to adjust an amount of fuel sprayed by a spraying means. The valve 20 in Japan '141 is characterized in that document as "an hydraulic proportional control valve". It is further described that stepless combustion is achieved in response to a required heat generation by controlling a returning flow according to an opening degree of the valve 20 and determining combustion

amount at the fuel-spraying nozzle 1¹. Consequently, even if one combines Japan '141 with Kessler, the limitations of claim 1 are still not taught or obvious.

Thus, claim 1 is believed allowable.

Claims 8 and 13 each requires a corresponding intermittently operating valve in a second channel, as in claim 1. Claim 22 recites an intermittently operating valve disposed in a return canal so as to be closed and opened intermittently or periodically.

Accordingly, for the reasons set forth with respect to claim 1, claims 8, 13 and 22 are likewise believed allowable.

The remaining claims each depends from one of claims 1, 8, 13 and 22 and recites further significant structural detail to further distinguish over the applied art.

Certain of the claims, such as claim 7, recite the intermittently operating valve to be made up of a valve body and a valve body housing relative to which the valve body is guidingly moved. A separate casing is provided around the valve body housing. This structure is shown, for example, in Applicant's Figures 3 and 4. The intermittently operating valve 25 is a self-contained unit consisting of the valve body and the valve body housing, which is placed in a separate casing. It is not clear what the Examiner is relying on for the corresponding separate valve body housing and casing with the applied art. The Examiner makes reference on page 2 of the Action to the "casing of the valve" in Kessler. However, with respect to those claims requiring the separate valve body housing and casing, Kessler is deficient as not disclosing such separate elements.

¹ This language is based upon a partial translation prepared by the applicant's representative in Japan.

The Examiner relies additionally on Mizushima in rejecting claim 5. However, Mizushima is not concerned with a valve for fuel in the claimed environment.

In rejecting claims 16 and 18-20, the Examiner relies additionally on Smith, which does not teach or make obvious the structure in claim 13, upon which these claims are based.

Reconsideration of the rejection of claims 1, 3-26, 29-34, favorable consideration of new claims 35-38, and allowance of the case are requested.

The additional claim fee of \$200.00 is enclosed. Should additional fees be required in connection with this matter, please charge our deposit account No. 23-0785.

Respectfully submitted,

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Date: Sept 4, 2007